

Claims

1. A prosthetic repair fabric comprising:
a body portion of implantable, biocompatible prosthetic material, the body
portion including a middle section having a first width and a pair of end portions
5 extending in a longitudinal direction from opposite sides of the middle section, each end
portion having a second width that is greater than the first width.
2. The prosthetic repair fabric according to claim 1, wherein the end portions
are flared and have a width that increases in the longitudinal direction away from the
10 middle section.
3. The prosthetic repair fabric according to claim 2, wherein the body
portion includes top and bottom edges that converge toward each other in the
longitudinal direction from the end portions toward the middle section.
15
4. The prosthetic repair fabric according to claim 3, wherein the top and
bottom edges are curved.
5. The prosthetic repair fabric according to claim 1, wherein the body
20 portion has a generally bow-tie shape.
6. The prosthetic repair fabric according to claim 1, wherein the body
portion includes a layer of fabric that is susceptible to the formation of adhesions with
tissue and organs, the layer of fabric including first and second surfaces and a fabric edge
25 extending from the first surface to the second surface, the first surface adapted to face a
tissue or muscle wall when the prosthetic repair fabric is placed in a patient, the second
surface adapted to face away from the tissue or muscle wall and toward cavity viscera.
7. The prosthetic repair fabric according to claim 6, wherein the body
30 portion includes a surface barrier that inhibits the formation of adhesions with tissue and
organs, the surface barrier being disposed on the second surface of the layer of fabric to

inhibit the formation of adhesions between the second surface and adjacent tissue and organs when the prosthetic repair fabric is placed in a patient.

8. The prosthetic repair fabric according to claim 7, wherein the surface
5 barrier is formed from ePTFE.

9. The prosthetic repair fabric according to claim 6, wherein the body
portion includes an edge barrier that inhibits the formation of adhesions with tissue and
organs, the edge barrier extending about at least a portion of the fabric edge to inhibit the
10 formation of adhesions between the portion of the fabric edge and adjacent tissue and
organs.

10. The prosthetic repair fabric according to claim 6, wherein the layer of
fabric is formed from one of collagen, PTFE mesh and polypropylene mesh.

15

11. A method of treating gastroesophageal reflux disease, the method
comprising:

(a) creating at least one external fold on the external wall of the esophagus;
and

20 (b) cinching the at least one external fold to create at least one external
plication on the esophagus.

12. The method according to claim 11, wherein step (a) includes creating a
plurality of external folds on the external wall of the esophagus, and step (b) includes
25 cinching the plurality of external folds to create a plurality of external plications.

13. The method according to claim 11, wherein step (a) includes creating first
and second external folds on the external wall of the esophagus, and step (b) includes
cinching the first external fold to the second external fold to create the at least one
30 external plication.

14. The method according to claim 13, wherein step (a) includes creating a plurality of pairs of first and second external folds, and step (b) includes cinching the first external fold to the second external fold of each of the plurality of pairs of first and second external folds to create a plurality of external plications.

5

15. The method according to claim 13, wherein step (b) includes suturing the first external fold to the second external fold.

16. The method according to claim 11, wherein step (a) includes applying
10 suction to a portion of the external wall of the esophagus to draw the portion of the external wall outwardly.

17. The method according to claim 16, wherein step (a) includes inserting a suture through the portion of the external wall.

15

18. The method according to claim 11, wherein the at least one external plication extends in a longitudinal direction along a length of the esophagus.

19. The method according to claim 11, wherein the at least one external
20 plication extends in a lateral direction about an external circumference of the esophagus.

20. The method according to claim 11, wherein steps (a) and (b) are performed laparoscopically.

21. The method according to claim 11, further comprising a step (c) of
25 repairing a hiatal hernia.

22. The method according to claim 21, wherein step of (c) includes implanting a prosthetic repair fabric proximate the hiatal hernia.

30